UGANDA PROTECTORATE

ANNUAL REPORT

OF THE

DEPARTMENT OF AGRICULTURE

FOR THE PERIOD

1st July, 1945–31st December, 1946

PART I—ADMINISTRATIVE

Published by Command of His Excellency the Governor.

ENTEBBE
PRINTED BY THE GOVERNMENT PRINTER, UGANDA
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AGRICULTURE DEPARTMENT

ANNUAL REPORT

PART I.—ADMINISTRATIVE.

For the Years 1st July, 1945—31st December, 1946.

FOREWORD.

As this is the first post-war annual report, it is appropriate to review briefly the effect of the war years on the agricultural development of the Protectorate.

War-time conditions did not have the retarding effect which might have been expected on agricultural development in Uganda. The need for maximum production of food and export crops, backed by assured markets and stable prices, encouraged development at a pace which would have been difficult to achieve under normal conditions. Nor must the war-effort consciousness which was awakened in the African producers and their chiefs be underestimated. This in itself rendered the task of the Department to achieve maximum production less onerous than it might otherwise have been. A singularly high degree of co-operation was obtained and maintained throughout the war, and this was extended, not only to actual crop production, but also to the adoption to no little extent of better methods of cropping and farming so that increased production was not on the whole attained at the expense of land deterioration. Without this co-operation, the Department depleted by the release of nine European officers for service with the forces, would have had to face a difficult task with little prospect of success. The reduced European staff had also to undertake administrative duties and give much time to the operation of war-time controls. In consequence, considerable responsibility had to be delegated to senior African staff to whom great credit is due for the praiseworthy manner in which they fulfilled their additional duties.

The general failure of the short rains in the two successive years, 1942 and 1943, added to the difficulties of the period and despite every effort being made to utilise swamp side areas for essential food production, supplies of famine relief food had to be imported for several areas and redistribution of internal supplies was necessary for others.

The intensification of crop production had a marked effect on the general agricultural economy of the country. The increasing importance of oilseeds, grains, pulses and millets and the introduction of new and profitable crops such as flax and nicotine tobacco, resulted in a marked departure from the earlier reliance upon cotton as the principal money producing crop of the country and to a less extent from coffee in the non-cotton producing areas. This introduced a more balanced agricultural economy than had been possible under peace-time conditions of production and indicated possible future trends of post-war development. Early in the war-period, maize production on a large scale was called for to ensure adequate supplies of this food for Uganda and for other East African Territories. Production for export was agreed to with some reluctance in view of the reputation of this crop for soil impoverishment. Although it had hitherto been grown to

a negligible extent, marketed production reached the high figure of 573,749 bags in 1946 in addition to the large quantities consumed locally by the producers as an addition to their diet. The soya bean was also a new crop for the African and, although latterly growers became prejudiced against it for various reasons, production reached 4,088 tons in 1944. The bulk of this crop was grown primarily for export to the forces in the Middle East but a factory for the manufacture of soya bean products was established locally and as military requirements grew less an increasing quantity of soya beans was allocated to this factory. In this connection, attention is drawn in passing to a trend, which started during the war and was stimulated by war conditions, to process locally produced primary products internally instead of relying upon export as hitherto. Other examples are the development of the nicotine tobacco and the flax industries, the increased demand for local tobacco by Uganda factories and the rising production of edible oils and soap from oilseeds.

Rice cultivation on an extensive scale was started in the Eastern Province and in Buganda, but in the latter Province the crop received such a serious set-back from Blast disease in its first planting season that production dropped to a negligible figure. In the Eastern Province, however, cultivation expanded well and in 1944, 1,200 tons of paddy rice were marketed in addition to considerable quantities consumed by the growers as a new item in their diet. As regards pulse crops, the demand for beans for military requirements was exceptionally well met and the production of mixed beans increased rapidly to the high level of 15,938 tons in 1946. This total includes minor pulse crops and grams which were also produced in large quantities to meet an increased demand from the Asian community which was unable to obtain normal supplies of similar pulses from India. Among the oilseeds, groundnut and simsim production increased considerably but not to the extent which had been hoped as the high labour requirements of these two crops combined with increasing shortage and cost of labour tended to offset the improved prices offered. There was also increased internal consumption of these crops and, despite considerable expansion in the acreage of groundnuts, there was not a proportionate increase in the quantities marketed.

There was a notable increase in tobacco production in Bunyoro and in 1943 a record crop of fire-cured leaf, amounting to 3,753,795 lbs., was attained as against 2,014,103 lbs., in 1939. In subsequent years, however, the crop began to feel the competition of other crops, particularly food crops of which there was a marked increase in cultivation for sale locally at remunerative prices and in 1946, production had dropped to 1,688,145 lbs.

A new and promising development was the production of flue-cured tobacco in the West Nile District. Trials of this crop were made in 1940–41 and in 1942 cultivation was started by African growers. The scale of cultivation is small, averaging only 63 acres per year but the quality of leaf and the curing, for which African staff is largely responsible, is of a high order. In 1946, production reached a total of 18,846 lbs. of cured leaf.

The limited demand for air-cured leaf continued to be met by production also in the West Nile District and annual sales during the past eight years averaged 66,498 lbs.

With the high demand for oilseeds of all types, cotton seed became valuable, both for the production of edible oil for East African consumption and for export. Previously cotton seed had been largely a waste product of the cotton industry which, after seed requirements had been met, was

largely disposed of either as ginnery fuel or by burning in waste dumps. Even these latter were utilised during the war, as the ash from old dumps was recovered and exported to Kenya for use as manure in the drive for increased cereal production in that territory. To regulate the disposal and utilisation of cotton seed and other oilseeds an Oilseeds Control was established. This handled the total production marketed, fixing prices to the producer and allocating for local crushing or export such quantities as were required for these purposes. The valuable cake by-products of the crushing mills were also disposed of by the Control and were exported largely to Kenya to augment supplies of cattle food.

Military requirements of eggs, fresh fruit and vegetables for troops in Uganda and Kenya were met to a considerable extent by organisation of production and controlled marketing of these commodites. Camps of Polish refugees and interned aliens in Uganda were also supplied.

As regards European grown crops, rubber production became of paramount importance after the fall of Malaya and to organise production from all available sources of plantation and forest rubber a Rubber Production Committee was set up. This Committee was responsible for ensuring that all planted areas were utilised to the best advantage, for fixing prices of rubber and organising buying and marketing. The stabilisation of prices did not markedly increase supplies over those obtained in the years immediately prior to the war, but ensured the maintenance of production from all available sources at a maximum level and reduced fluctuations of output from causes other than weather to a minimum. Production during the period 1939–45 averaged 637 tons per year reaching 855 tons in 1943.

Uganda tea estates planted prior to and during the war were able to meet Uganda's internal requirements of tea and exports increased steadily. The production of pyrethrum was started in the Kigezi District in 1942 and by 1944 was able to contribute 1,148 cwts. to East African supplies of this much needed commodity. The sugar estates, although hampered by the difficulty of obtaining machinery replacements, increased production to some extent and in addition to meeting Uganda's requirements in full maintained exports at a high level.

To implement recommendations made by the East African Production Commission, legislation was introduced in 1943 in the interests of optimum production of all crops required for war purposes or for internal food supplies. Such crops were scheduled as primary produce and their purchase and the prices payable were strictly controlled and their disposal organised through approved agents operating in conjunction with the Control. Prices for all such primary produce were fixed at levels calculated to encourage balanced production and in general these prices showed a marked advance on prices previously prevailing on the open market. An important feature of these control arrangements was that a fixed price implied a guaranteed market for all controlled produce offered for sale. The agents of the control, therefore, had to face the risk of over-buying, but the sense of stability given to both producer and primary buyer more than justified such a risk being taken. In practice, it was found that, while delays occurred in disposal, the demand was such that this could always be effected.

The marketing of the major cash crops of the country, cotton and coffee, was controlled by separate legislation. In the case of cotton, in addition to the pre-war control of primary marketing of seed cotton, the disposal of lint cotton was also regulated. Marketing of the crop followed normal lines in

1939 and 1940, but in 1941 unreasonably low prices, due to the position in India at the beginning of the season, necessitated Government taking the drastic action of closing down marketing for three weeks pending the making of arrangements with the Ministry of Supply for the disposal of the crop. The agreement reached had the effect of stimulating demand from India and prices improved and hardened on resumption of buying. In subsequent seasons, similar agreements were made with the Ministry of Supply and to facilitate orderly disposal and to ensure that the Ministry could obtain its agreed share of the Uganda crop, a Cotton Exporters' Group was established under the legislation referred to above. This Group comprised established cotton lint exporters and was responsible, as an agent of Government, for the sale of cotton lint to the Ministry of Supply and for seeking other markets as Government required at negotiated prices. The Group purchased all lint from ginners at prices based upon the price of seed cotton with agreed deductions for buying and ginning costs and a reasonable allowance for profit.

Prices to the growers for seed cotton were related to, but were not equivalent to the Ministry of Supply's price for lint. In the interests of inflation control, it was considered preferable that growers should receive such a price as would allow them a reasonable profit, takng into account the cost of production and the cost of living in any one season. In consequence, considerable profits were made by the Cotton Exporters' Group on the sale of lint and these profits were credited to a special fund which was established for the purpose of holding all moneys accruing to it in trust for subsequent disbursement in the interests of the cotton producing areas and for future price assistance should post-war market conditions make this desirable; by the end of 1946, the fund had reached the high total of over £5,000,000.

Despite increased and stable prices, cotton production did not expand during the war period, largely on account of competition from other crops and the influence of two consecutive bad seasons. In addition, the withdrawal of large number of growers for service with the forces and the increasing shortage and cost of immigrant labour in certain production areas no doubt exerted a considerable influence.

The following table gives details of cotton acreages and production, together with the average prices paid in each season from 1939 to 1946 :—

Cotton Production—Uganda: 1939–1946.

Season.	Estimated Acreage.	Tons of Seed Cotton.	Average Yield per Acre. Lbs.	Average Price Shs. per 100 lbs.
1939/40 ..	1,267,736	179,045	310	11/14
1940/41 ..	1,284,206	220,059	384	8/82
1941/42 ..	1,287,256	140,097	245	7/68
1942/43 ..	874,776	67,416	173	12/56
1943/44 ..	1,233,801	112,011	203	13/18
1944/45 ..	1,072,493	160,830	337	14/83
1945/46 ..	1,145,568	135,525	265	16/40

It is probable that for such time as the demand for subsidiary crops remains at its present level cotton is unlikely to regain its pre-war position of pre-eminence, but in view of its high importance as a revenue producing crop through the cotton export tax, every effort is being made to ensure that production is maintained and, by the introduction of improved agricultural practices, is further stimulated by obtaining increased yields per acre.

Prior to the war years, the production of native coffee, principally Robusta, had shown a decided upward trend which was maintained and accelerated during the war in consequence of increased prices. The Control of Coffee Regulations were introduced in 1942 to provide for the control and stabilisation of prices to the African producers and to arrange for the disposal of the crop. Previously prices had fluctuated considerably, but with stabilisation increased interest was taken in the crop and production rose from approximately 15,227 tons in 1940 to 24,449 tons in 1946. Details are given in the following table :—

Native Coffee Production : 1940–1946.
(NOT INCLUDING BUGISHU ARABICA).

Year.	1940.	1941.	1942.	1943.	1944.	1945.	1946.
Tons ..	15,227	17,747	16,099	17,717	11,856	16,083	24,449

Increased planting subsequent to 1942 was largely responsible for this increase in production, but in addition there was a considerable improvement in cultivation and large numbers of abandoned coffee plots were reclaimed from bush.

After a spectacular rise to over 4,000 tons in 1939, due to the cumulative effect of new plantings coming into bearing, the Bugishu Arabica crop settled down to an average production of about 3,000 tons. Steady progress was made with improvement both in quality and standard of cultivation but the chief feature of interest was the re-organisation of marketing. In 1940 there was formed the Bugishu Coffee Marketing Company, Ltd., which took over the business of buying and processing the crop, while the Bugishu Coffee Scheme was made a corporate body for the purpose of holding all property belonging to the Scheme ; it is controlled by a Board consisting of Government officials with a business man unconnected with coffee. This Board also controls the operations of the Marketing Company and is assisted by a local Advisory Committee which includes three African representatives of the growers. Latterly with the enactment of co-operative legislation and the appointment of a Registrar, the first steps have been taken to form Co-operative Societies working within the frame-work of the Scheme.

As regards disposal of the coffee crop, contract arrangements were effected with the Ministry of Food, whereby the Ministry undertook to take delivery of the whole crop of each season at an agreed price. Good stable prices to the growers were made possible under these contract prices, but as in the case of the cotton crop and for similar reasons, the grower did not receive the full market value of his crop. The profits made by the Control were paid into a special fund as in the case of the cotton crop to be held in trust by Government for the future benefit of the coffee producing areas. By the end of 1946, this fund known as the Hard Coffee Fund totalled approximately £400,000. The Bugishu Coffee Scheme likewise accumulated a surplus of over £300,000. It will be appreciated that these taken together with the Cotton Fund represent considerable potential benefits in the cotton and coffee producing areas.

At the present time, Uganda is the biggest producer of coffee in the Colonial Empire and the crop is becoming increasingly important in the internal economy of the Protectorate. The 1945 crop was of an estimated

value of £1,143,211, which represented 11·5 per cent. of the total value of all exports. In the same year, the cotton crop was valued at £7,025,774. The imposition of an export duty on all native grown coffee graduated according to its value was made in 1945 and in consequence this crop now makes an important and direct contribution to the revenue of the Protectorate.

On the whole, the Protectorate has emerged from the war years with a satisfactory balance of agricultural credit in respect of both crop production and agricultural development. The former has been discussed in some detail and as regards the latter, reasonable progress has been made particularly from the aspect of soil conservation and land use. This is primarily an educational progress which must necessarily be slow but in general it can be stated that a consciousness of the need to husband the soil as the prime source of wealth and prosperity has been awakened. This has proved itself in a readiness to adopt departmental advice and policy directed towards that end. Outstanding examples are widespread strip cropping in Teso District, gully stopping, contour hedging and compound grassing in Buganda and in the Western Province, controlled movements of population from overcrowded areas in Kigezi District and contour planting of line crops in all areas.

These are largely palliative measures only and much still remains to be done on the fundamental problem of fertility maintenance by the adequate resting of arable land and the manuring of crops. In this direction too, some progress has been made ; compost produced from township refuse in Kampala is now being applied freely to banana gardens in the vicinity of that town in addition to large quantities of coffee husks obtained from the coffee curing works. The use of cattle manure is less popular, largely on account of handling difficulties but in special areas, where it has been possible to arrange for wheelbarrows to be made available, these have been bought for use in moving manure on to permanent crops from the cattle kraals. Grass as a crop is beginning to receive more attention and some sort of control of grazing by communal herds is now becoming increasingly common especially in Teso. In Buganda progressive individual cattle owners are showing some appreciation of the close relation between the grazing grounds and good cattle management.

Future prospects for progressive agricultural development are good but are restricted by the limitation of manual output and the present system of small plot farming. Investigations into the possibility of introducing mechanical means of cultivation have, however, been started. It is obvious that, even should mechanical cultivation prove to be an economic proposition under Uganda conditions, a radical change will be required in the present small plot farming system and the investigations cover the re-organisation of cropping lands into contour strips to facilitate not only the economic use of tractors but also the development of better farming practices.

A further limitation to future agricultural development is the present restricted availability of land for both stock and crop husbandry on account of infestations by tsetse fly over large areas of the Protectorate. Investigations into methods of reclamation of such lands are being actively pursued by those responsible and should these prove successful, much fertile and potentially productive land will become available for increased agricultural development. The planned use of land in these and existing agricultura

areas, with all that such planning implies, must come increasingly to the forefront of post-war agricultural policy.

It is becoming more and more apparent that the present rather haphazard pattern of native agricultural production is unlikely to be able to maintain either the increasing populaton or the growing desire for higher living standards. War-time increases in crop prices have to some extent met the latter temporarily, but as regards the former, two successive bad seasons during the war period have demonstrated clearly how delicate is the balance between food sufficiency and want and planning for increased internal food supplies and insurance against famine must of necessity take first place in post-war policy.

Turning to the year 1946, world conditions have permitted of little change being made in the main lines of work which the Department has been required to undertake. The emphasis, as during the war years, has been on production and in particular on the necessity of the Protectorate producing the maximum amount of food. In this connection, weather conditions were, on the whole, more favourable than during the previous years. After a late start, particularly in Buganda, rains continued throughout the year and in fact were excessive in some areas. The delayed start of the rains caused somewhat severe food shortages during the months of June to August and it proved difficult to maintain adequate supplies of food to urban areas, especially for large consuming institutions such as hospitals and schools and for labour working on estates. Good rains during the greater part of the year, however, aided by intensive propaganda, resulted in satisfactory crops being harvested in all districts. In addition to all areas being self supporting in the matter of food supplies and the substantial restocking of local food reserves the following quantities of the main food crops were sold at organised markets :—

	Purchases.	Exports to other East African Territories.
	Tons.	*Tons.*
Maize	52,000	30,600
Beans and Pulses	15,900	9,000
Groundnuts*	3,800	800
Mtama (Sorghum)	1,200	1,000

In addition to the work directed to encourage maximum production of food, the Department has been concerned with maintaining the production of export crops at at least the existing levels. Coupled with both these activities, there was during 1946 a continuation and where possible an intensification of the work of investigation, demonstration and general dissemination of knowledge in respect of land management and improved farming systems.

It is unfortunate that this last named but all important objective cannot always be reconciled with the need for increased production, as instanced by the Protectorate continuing to grow a large maize crop principally for export to neghbouring territories, a policy dictated by the general East African cereal position. While maize can properly take its place in due proportion in a normal crop rotation, only an urgent need for essential

* Acreage 1946 357,194.

cereals can justify a continuance of a policy of wholesale production of a crop such as this which, on the present scale, must ultimately adversely react on soil fertility.

In regard to economic crops, cotton planting was somewhat delayed in view of the necessity for consolidating the food position. This was true in respect of both the 1945–46 and the 1946–47 crops, which were also adversely affected by the late continuation of the rains and resultant damage by blackarm disease. The 1945–46 acreage was 1,145,568 and that for 1946–47 : 1,247,867 acres. The former crop amounted to 228,709 bales as compared with 270,194 bales for the 1944–45 season. The 1946–47 crop is estimated to total 230,000 bales. The value to the grower for the 1945–46 crop was £2,575,839 (1944–45 : £2,688,619), prices being increased by Shs. 2 per 100 lbs. to give an average of Shs. 16·40 per 100 lbs. over the Protectorate as a whole. Details of acreages and production in the various cotton zones are given in Appendix I to this report.

The lint from the 1945–46 crop was disposed of by bulk contracts with the United Kingdom Board of Trade and with the Government of India, 74,786 bales being shipped to the United Kingdom and 150,908 bales to India. The export arrangements were conducted efficiently by the Cotton Exporters' Group established under the Cotton Control Regulations, 1943.

The 1945–46 native coffee crop was a record one. Total buyings by the Coffee Control amounted to 22,452 tons of which all except 437 tons was robusta. The Bugishu arabica crop amounted to 2,817 tons, while the Bwamba area of Toro District produced 223 tons of robusta. The approximate total value of these crops to the grower was £862,500.

Information in regard to the tobacco crops is given in the report of the Provincial Agricultural Officer, Western Province, included in this report. An indication of production during 1946 of other crops is given in the appended table which gives acreages and sales of the crops shown :—

	1945–46.		1944–45.	
	Acreage.	Sales Tons.	Acreage.	Sales Tons.
Simsim	231,261	676	242,317	2,390
Rubber	7,580	608	7,580	678
Sugar	29,685	46,031	31,985	41,889
Tea	4,574	1,714	4,524	1,344
Sisal	9,420	1,055	9,420	1,901

Investigations connected with land management, including soil conservation, the use of grass as a crop and the inter-relationship of crops and stock were continued throughout the year on the main experiment stations at Kawanda, Serere and Ngetta. In this sphere of work a development during 1946 has been the formation of an Animal Husbandry Committee consisting of Veterinary and Agricultural Officers ; this body acts in an advisory capacity on livestock management and stock improvement and in particular is concerned with the development of systems of mixed farming suited to local conditions.

Work of importance was begun during the year on the utilisation of Uganda rock phosphate and the first series of trials has given encouraging results. These trials will, of course, need to be continued over a period of

years before conclusive results are obtained and the economics of artificial fertilisers in their application to African agriculture determined. Such fertilisers can at the best only form part of more general improvements in agricultural practice but their use may prove to be of particular value in those areas which need special consideration on account of pressure of population with resultant overcropping.

One such area is in the Kigezi District and mention should be made of the work now being carried out to remedy the position there. The Kigezi resettlement scheme, a short account of which is given in the report of the Provincial Agricultural Officer, Western Province, is proving successful on the basis of voluntary movement and resettlement of surplus population. The undertaking and the results which are being obtained will be of great value when other projects of a similar nature are being considered. Another problem area, Karamoja, has for the first time been allocated an Agricultural Officer and was fortunate in receiving a visit from Mr. B. J. Hartley, Director of Agriculture, Aden. It was considered his considerable experience in that territory and the application of some of the water control methods adopted there might well be suitable for application in Karamoja. He submitted a valuable report "Soil and Water Conservation in Karamoja" containing recommendations which will be acted upon.

The desirability of increasing rice production, especially in certain parts of the Eastern Province, is appreciated and some progress has been made but it is hoped to accelerate this by the better utilisation of lakes and swamps. For this reason surveys of certain areas in Teso are being made to ascertain their suitability for rice growing under controlled water supplies derived, initially, from Lake Kyoga.

A not inconsiderable proportion of the Department's somewhat attentuated staff has, during the year, been engaged directly or indirectly with agricultural training courses for returning soldiers at Bukalasa, Serere and Ngetta. Other courses of training have been given to Makerere agricultural students, women instructors, rural assistants, prison warders and peasant cultivators. A much needed want shortly to be filled is the publication of a book on agriculture suitable for Africans and for use also in schools, this has been a work of some magnitude but the final stage was completed during the year. Attention in the matter of publicity and information has not only been confined to Africans, with the ready co-operation of the Press, the public has been kept in touch with the work of the Department and a noticeable development during the year has been the increase in the numbers of visitors to departmental stations.

Early in the year the Protectorate received a visit from three distinguished agricultural scientists, Sir Harold Tempany, until recently Agricultural Adviser to the Secretary of State, Sir Frank Engledow and Professor Munro. The primary purpose of the visit was in connection with the reorganisation and centralisation of East African Agricultural, Veterinary and Forestry Research but many other matters of interest were discussed. The visit terminated with a meeting in Nairobi at which proposals for the establishment of an East African Agricultural Research Organisation were formulated.

The year 1946 saw no improvement in the staff position and though three Agricultural Officers took up duty on first appointment during the year there remained a high proportion of vacant posts unfilled at the end of the

year. In the Laboratories Division also vacancies exist, owing to the retirement of senior officers, which could not be filled in 1946.

I would record the thanks of the Department to the Director of Supplies, the Deputy Controllers of agricultural produce and those other unofficials who have always given generously of their advice and experience.

A. B. KILLICK,
Director of Agriculture.

ENTEBBE,
22ND SEPTEMBER, 1947.

ANNUAL REPORT—WESTERN PROVINCE.

PART I.—ADMINISTRATIVE.

Weather Conditions.

Conditions were again abnormally dry until April, and it was not until then that it was possible for the planting of food crops to begin. This unusually long dry season caused shortages of food in most of the districts until the new crops had been harvested in August and it further reduced the acreage of economic crops in Bunyoro, Toro and parts of Ankole.

Rains during the second half of the year were exceptionally heavy and by the end of December the yearly average rainfall figure had in most places been exceeded.

Cotton.

1945–46 Crop.

The prolonged dry season of 1945 caused a delay in the cultivation of the cotton plots as it was essential to plant large acreages of food crops first. However, weather conditions were favourable during July, August and September and an average acreage was planted. Yields were disappointingly low in Lango and East Acholi Lower Zones, owing to late planting and a dry spell which set in during late October.

Quality was below average but grade was well up to average and an improvement on the previous year.

Figures relating to the crop are summarized below :—

Zone.	Acreage planted.	Production.	Price paid. *Shs.*		Average Yields.
	Acres.	*Tons.*	*A.*	*C.*	*Per acre lbs.*
North Lango	51,367	4,416	16	4/50	191
South Lango	31,922	1,571	16	4/50	110
Acholi West	19,216	2,712	16	4/50	316
Acholi East Upper ..	9,161	1,064	16	4/50	260
Acholi East Lower ..	6,275	523	16	4/50	187
Bunyoro	18,825	2,305	16/40	4/50	274
West Nile–Madi	18,600	2,232	17	5/–	269
Toro District	8,974	1,024	16/51*	*	255
Totals ..	164,340	15,847			

1946–47 Season.

Seed Distribution.—No new introductions occurred and each area supplied its own seed; the position is therefore that B.P.52 is in all zones except North Lango Zone, South Lango Zone and Acholi East where N.17 is still grown. In 1942/43 N.17 seed from Busoga had to be introduced to make up the deficiency of seed from the previous year. There is, therefore, some admixture in these three areas of the two strains of N.17.

* Average weighed price for whole district. No fifi was bought. Prices payable to growers were fixed at Shs. 2 per 100 lbs. higher than in the previous season.

Plantings.—Despite the lateness of the rains a satisfactory acreage was planted by the end of August except in Bunyoro. Very heavy rains occurred from August to November which did not do the damage that was expected, except in Bunyoro, where Blackarm and Lygus did considerable damage on the heavier soils. At the end of the year the crop was estimated to be about 39,000 bales.

The acreage figures by months for each zone are :—

Zone.	May.	June.	July.	August.	September	Total.
North Lango ..	847	16,341	35,555	10,006	746	63,495
South Lango ..	535	4,961	18,617	13,305	657	38,075
Acholi West ..	446	1,847	17,467	7,748	711	28,219
Acholi East Upper ..	1,781	3,328	8,438	5,876	473	19,896
Acholi East Lower ..	1,038	3,671	4,598	2,466	Nil	11,773
Bunyoro	82	1,093	4,864	5,987	583	12,609
West Nile–Madi ..	Nil	54	5,841	15,316	2,575	23,786
Toro District ..	Nil	46	1,779	7,119	1,888	10, 832
Totals ..	4,729	31,341	107,159	67,823	7,633	208,685

Coffee.

The change over from Arabica to Robusta coffee, mentioned in the 1938 Report, is progressing slowly in Ankole at suitable altitudes where *Antestia* is damaging Arabica. In Kigezi, Robusta has not grown well and Arabica coffee cultivation has greatly decreased because of *Antestia* and shortage of land for food cultivation, which became very acute during the drought years of 1943 and 1944.

The main feature of the war period has been the increase of price. In 1939 the price for hulled Arabica coffee was 18–26 cents per pound in Kampala. In 1940 it varied from 10 to 27 cents per pound. In 1943 the Coffee Control Board fixed the price for Ankole, Kigezi and Toro native grown hulled Arabica coffee at 38 cents per pound. It remained at this price until 23rd December, 1946, when it was increased to 42 cents.

Robusta coffee has increased from 11 cents per pound in Kampala in 1939 to 28 in 1943 where it remained until December, 1946, when it was increased to 32 cents. Bwamba (Toro) Robusta coffee has continued to maintain a premium over Buganda Robusta of about 4–5 cents per pound.

The 1947 sales are estimated to be Arabica, Toro and Ankole 200 tons. Robusta, Bwamba 180 tons.

Toro District.

Arabica.—Although *Antestia* has spread during the last few years cultivation of Arabica coffee has continued to increase very satisfactorily on the mountain area due to the enhanced price. More than 62,900 plants were distributed in 1946. Unfortunately very little interest is taken in pruning the coffee in spite of trained pruners provided to assist with the work.

Organised markets are arranged in the chief coffee areas which are attended by our staff who inspect the crop before buying ; in this way the grade is well maintained.

The following are the sales since 1939 :—

	Tons.		*Tons.*
1939 ..	65	1943 ..	88
1940 ..	58	1944 ..	97
1941 ..	77	1945 ..	84
1942 ..	72	1946 ..	110

Bwamba Robusta.

Up to 1943 there was a gradual increase in the production of this area ; but the drought of 1943 and 1944 affected yields, and since then the shortage of labour and the good returns from rice cultivation have caused the plots to be neglected. During this year an improvement has been made in the standard of cultivation and a cultivators' group has been formed which is doing good work in pruning and mulching.

The total acreage is estimated at 2,250 acres, sixty-three acres being planted during the year.

The marketing of the crop has continued satisfactorily with an exclusive licence to Messrs. The Old East African Trading Company. The grade of coffee sold has been well maintained.

The sales for the season July to June have been :—

	Tons.		*Tons.*
1939/40 ..	292	1943/44 ..	234
1940/41 ..	206	1944/45 ..	299
1941/42 ..	316	1945/46 ..	223
1942/43 ..	382		

Ankole District.

Antestia and a change over to Robusta coffee and other economic crops such as groundnuts, soya beans, ordinary beans and maize, has resulted in a neglect of Arabica cultivation. Considering all factors the export of clean hulled Arabica has been fairly well maintained.

The following figures give the sales of clean hulled Arabica and Robusta over the last few years :—

Year.	Arabica.	Robusta.
	Tons.	*Tons.*
1939 ..	178	Nil
1940 ..	101	0·6
1941 ..	128	3
1942 ..	136	15
1943 ..	73	14
1944 ..	100	15
1945 ..	50	11
1946 ..	123	30

Kigezi District.

The spread of *Antestia*, the high pressure of the population on the land, drought, the introduction of high nicotine content tobacco and flax has probably seen the death of Arabica coffee cultivation in South Kigezi. The production has fallen from over 340 tons in 1942 to about 10 tons in 1946. South Kigezi with its high cold damp valleys has shown itself unsuitable for coffee.

There has been a slight revival of interest in coffee cultivation in Kinkizi and Ruzhumbura and it is hoped to increase cultivation in this warmer area. It is hoped also to reduce *Antestia* by dusting with pyrethrum powder.

Bunyoro and West Nile Districts.

The higher prices in recent years have caused a slight interest in Robusta coffee. Five tons were sold as against a few bags in previous years.

In the West Nile no interest is shown in Arabica coffee cultivation in the highlands. The production has been steadily falling since 1938, the total crop bought in 1946 being less than a ton.

Tobacco.

Bunyoro District Fire-Cured.

To stimulate production the price was increased from 30 cents to 35 cents per pound for Grade I and from 20 cents to 25 cents for Grade II. Unfortunately weather conditions were against an increased acreage, the main rains did not start until the middle of April, so plants from all the early sown beds were too large for transplanting; further a larger acreage of food crops had to be planted to make up for the deficiency in food stocks as a result of two years bad rains. Lack of immigrant labour also detracted from the increase in acreage hoped for.

The crop did not grow well as a result of localised occurrences of rain during May and June and the incidence of Mosaic and Curly Leaf was very high especially in east Bunyoro.

Buying of the crop commenced on October 14th with three licensed buyers, Messrs. British American Tobacco Company, Messrs. East African Tobacco Company (1946) and Mr. D. N. Stafford, O.B.E., on behalf of exporters. The marketing was carried out without difficulty and was completed by December 6th. The quality of the main crop was not considered to be as good as in the past except from two Gombololas where newly imported seed from Nyasaland had been sown. For the 1947 crop it was therefore decided to import fifty pounds of Nyasaland Heavy Western seed.

The total purchases during the last eight years have been:

Year.	Acreage.	Yield Per Acre.	Total Purchase.	Grade I.
				%
1939	4,500	448	2,014,103	41·2
1940	2,672	478	1,277,185	46·8
1941	4,250	402	1,706,524	52·9
1942	8,134	394	3,209,187	51·5
1943	8,783	427	3,753,795	44·4
1944	3,539	407	1,439,108	41·9
1945	5,239	431	2,096,529	55·9
1946	4,980	338	1,688,145	57·7

Masindi Tobacco Packing Factory.

During the course of the year the two boilers were overhauled in time for the opening of the season in the autumn.

In 1945 the processing charge was raised to 2·5 cents per pound to cover increased running costs and to include insurance against fire.

Comparative figures for the amount packed at the factory, but not including insurance and maintenance costs are given below:—

Season.	Amount packed.	Revenue.	Expenditure.	Cost per pound.
	lbs.	*Shs.*	*Shs.*	*cents.*
1938–39	1,293,539	17,334 40	8,876 44	0·686
1939–40	735,259	9,435 13	7,262 53	0·988
1940–41	311,017	4,414 62	4,224 69	1·356
1941–42	524,226	7,008 41	5,490 06	1·047
1942–43	857,389	11,488 98	7,928 57	0·924
1943–44	1,387,909	18,597 98	15,918 81	1·146
1944–45	562,938	12,826 74*	5,640 75	1·002
1945–46	748,995	18,725 14	8,616 00	1·150

* Processing charges raised to 2·5 cents per pound.

WEST NILE DISTRICT.

Dry weather affected the tobacco beds in this district, rivers and springs dried out which therefore reduced the number of plants available. The total acreage planted was 270 acres, this gave a total crop of 77,026 lbs., a big increase over the previous years. The price was increased by five cents per pound for both grades, Grade I being 35 cents per pound and Grade II 25 cents per pound.

The crop statistics for the past few years are :—

	1939.	1940.	1941.	1942.	1943.	1944.	1945.	1946.
Number of growers ..	2,225	1,257	1,174	1,863	1,044	650	1,019	1,091
Acres	452	296	338	462	240	171	231	275
Purchase lbs. ..	77,122	46,941	70,552	102,392	83,644	30,569	43,730	77,026
Yield per acre lbs. ..	171	159	209	222	348	179	190	280

FLUE CURED.

Trials of flue-cured tobacco were conducted at Arua in 1940 and 1941 ; these indicated that this crop could be grown satisfactorily in the West Nile District and it was therefore decided to begin cultivation by Africans on a small scale, two crops of 50 acres each being grown in 1942 near Terego. The green leaf was purchased from the growers at four cents per pound.

In spite of many difficulties this enterprise has proved successful and good quality leaf is produced. Owing to shortage of European staff the leaf has been entirely cured by the African staff since 1944.

In 1946 the total acreage planted was 60 acres. The dry weather until April made care of the beds difficult and growing conditions in the early stages were not favourable ; however, there was little disease, and weather conditions improved when the crop was ready for harvesting. Curing started in July and was completed by September. The price paid was 5 cents, 4 cents and 3 cents per pound of green leaf according to the grade of leaf.

The varieties grown during 1946 were Jamaica Wrapper and White Stemmed Orinoco. The following varieties have been tried in the past : Amorello, Willow Leaf, Yellow Mammoth and Cash, they have either not grown so well or have proved unsuitable as compared with the two varieties now being grown.

The crop statistics since flue curing started on an economic scale are :—

Year.	1942.	1943.	1944.	1945.	1946.
Number of growers	190	182	257	171	189
Acres	60	60	86	47	60
Total purchases green leaf	117,813	174,698	204,939	89,262	172,462
Average yield per acre green leaf (lbs.) ..	1,964	3,176	2,383	1,899	2,874
Total saleable cured leaf (lbs.)	11,188	17,688	19,800	13,572	18,846
Total saleable air-cured leaf (lbs.) ..	2,088	594	1,860	Nil	600
Yield per acre of cured leaf (air and flue) lbs.	221	305	252	289	324

High Nicotine Content Tobacco, Kigezi.

In 1941 as a result of increased demands for nicotine, 44 acres of high nicotine content tobacco, *Nicotiana rustica*, were grown in Kigezi. This gave yields ranging from 300–700 lbs. per acre which was bought at 10 cents per pound dried leaf.

To start with, this new industry experienced difficulties in obtaining materials for extracting the nicotine and it is only lately that a plant has been obtained which will extract the nicotine satisfactorily.

The spring 1946 crop suffered from very difficult weather conditions. Little rain occurred except in April, which was very excessive, but in spite of this 406 acres were planted which gave an average yield of 507 lbs. per acre.

The autumn crop was planted in September and October. The total acreage of 714 acres is an increase of 76 per cent. on the last crop. Cultivation has been extended to Bufumbira County. The crop has made excellent growth and a record crop should be harvested if the rains are not too heavy in early 1947 before harvesting.

The price was raised to 12 cents per pound early this year, which has encouraged growers considerably. Although average yields per acre have varied from 500 lbs. to nearly 700 lbs. per acre during the past three years, yields of over 1,000 lbs. per acre are not uncommon, so that returns per acre can be over Shs. 120 per acre per crop and two crops can be grown each year. At present the average size of a plot is only one-tenth of an acre, although a number of people plant several plots.

The production figures from 1942 to 1946 are :—

Crop.	Bought.	Total.	Acreage.	Yield per acre.
		Lbs.		*Lbs.*
November	1942	68,656	250	274
February	1943	19,123	80	238
November	1943	73,910	140	528
February	1944	155,192	225	690
November	1944	137,317	259	530
February	1945	185,528	275	673
November	1945	240,042	378	635
February	1946	318,021	591	538
November	1946	205,760	406	507

Ankole.—As the demand for this leaf could not be fulfilled in Kigezi a small crop of 35 acres was tried in the autumn rains of 1945 in Buhwezhu County : this crop gave reasonable results and the acreage has now been extended to 170 acres. The yield for the first two crops averaged about 380 lbs. per acre.

Oil Seeds.

Simsim.—In 1942 a large increase in production was asked for and the price was increased to 10 cents a pound to the grower. The unfortunate weather conditions from 1942–45 made it impossible for the desired large sales to be made. With the end of the war and the return of the ex-soldiers, with plenty of money, there has been a stronger desire to eat more simsim as is shown by the sales in 1945 and 1946. During 1946 the autumn rains were excessive for good crops of simsim to be harvested.

The following are the sales in tons during the last few years :—

District.	1939.	1940.	1941.	1942.	1943.	1944.	1945.	1946.
Lango	151	326	156	1,307	266	281	242	66
Acholi	277	680	68	388	776	472	183	42
West Nile	135	324	470	223	Nil	Nil	33	27
Bunyoro	47	56	266	45	67	222	110	78
TOTALS ..	610	1,386	960	1,963	1,109	975	568	213

In 1945 the price was raised to 12 cents per pound but local sales amongst the people during 1946 were at about 20 cents per pound.

Groundnuts.—It was decided in 1944 to increase groundnut production in this Province. The price, 10 cents per pound to the grower was increased to 12 cents in 1945. In 1944, to increase plantings, 600 tons of seed were introduced to Lango but although a large acreage was planted sales were disappointing in this district.

In 1946, a good crop was grown in Lango but sales were disappointing ; with plenty of money to spare the growers prefer to eat the crop rather than sell it.

Drought affected the Ankole 1946 crop but the autumn crop, to be sold in the spring of 1946 is expected to be better.

The sales, in tons, for the last few years are :—

District.	1943.	1944.	1945.	1946.
Lango	No record	233	267	34
Ankole	88	239	630	453
Toro	7	24	56	80
TOTAL *Tons*	95	496	953	567

Shea Butter Nuts.—The demand for these nuts for the production of oil became so great, that in 1943 organised markets were arranged. Lango has produced the largest sales. The crop is seasonal depending on the size of the last crop, the rains and grass fires. There is a large local demand amongst the Africans and only the surplus is sold.

Sales, since 1943, in tons, are :—

District.	1943.	1944.	1945.	1946.
Lango	445	767	388	275
Acholi	24	282	30	26
West Nile ..	Nil	22	2	5
TOTALS ..	469	1,071	420	306

Flax.

In 1942 the first commercial crop of flax was grown in Kigezi District. Since then two crops per annum have been grown in Kigezi and the adjoining part of Ankole District. The acreage planted has now reached 3,000 acres a year. There are two factories, the main one at Kisizi with 32 scutching

berths, run by water power, and a 16 berth factory at Buyanza powered by a crude oil engine ; this will soon be converted into a 32 berth factory. In the early stages only dew retting was attempted, but experience has shown that water retting is better and easier. The production during 1946 was 72½ tons of fibre and 44 tons of tow.

Africans grow the crop in quarter acre plots, they produce deseeded straw of uniform length and clean seed. The average yield per acre of deseeded straw is about ¾ of a ton and 200 lbs. of cleaned seed. One Gombolola this year averaged about 21 cwt. of deseeded straw. The price paid to the grower is 3 cents per pound for straw and 6 cents per pound for seed. The retting and scutching is done at the factories under European supervision.

The present variety being grown is Liral Crown but, as it is believed that Stormant Gossamer would give better yields of fibre, a large scale trial of 20 acres is to be made with this variety in 1947.

Maize.

It has been the policy to endeavour to grow sufficient maize in Ankole and Bunyoro to meet, as far as possible, the major part of the local employers' demands.

This year the spring crop in both districts was a failure and little was sold. The autumn rains were good and given dry conditions for harvesting a reasonable amount should be sold early in 1947.

District.	1944.	1945.	1946.
Ankole	149	472	108
Bunyoro	453	57	10
Totals *Tons*	602	529	118

The price has been 4 cents per pound to the grower.

A little maize has been grown for sale in West Nile and Lango, the crop has however not been popular with the growers.

Rice.

An increase in rice production was asked for in 1942 from Bwamba area of Toro District. The crop is mainly planted on the upland although there are two small irrigated areas of a total of about 80 acres.

The sales at 8 cents per pound have been :—

	Tons.		*Tons.*
1942 ..	23	1945 ..	264
1943 ..	50	1946 ..	286
1944 ..	178		

In Lango about 1,500 acres were planted in 1946 but no sales were made on the open market.

Soya Beans.

Although efforts were made to grow this crop in Lango, Toro and Bunyoro it is only in Ankole that it has become popular and large acreages have been planted since 1944. A few people are eating the crop green or after roasting.

Ankole sales have been :—

Year.	Acreage.	Sales.
		Tons.
1944 ..	2,630	251
1945 ..	10,640	872
1946 ..	11,208	934

Wheat.

As with other cereals, efforts were made in 1942 to produce maximum acreages of wheat in Toro and Kigezi. From 1944 the food position in Kigezi did not allow any food to leave the district. In Toro the acreage gradually became less, and in 1945 it was decided, in view of the high transport costs to Kampala from Fort Portal and the improved cereal position, to give no encouragement to grow the crop and the price guarantee, which had been 7 cents per pound since 1942, was withdrawn. The 1946 sales were only 32 tons.

Other Food Crops and Famine.

The late arrival of the 1946 spring rains, which were also below average in Ankole, Kigezi and Toro, caused a shortage of food in these districts but no famine food supplies had to be given out. In Bunyoro the food position in June and July was more serious and a certain amount of food had to be imported. In Acholi, Lango and West Nile the previous policy of enforced planting of cassava as a famine reserve undoubtedly saved the situation.

In most districts, but especially Lango, very good crops of finger millet were obtained but the heavy rains at harvesting time did some damage.

Large acreages of cassava have been planted in all districts but much of this is badly attacked by mosaic disease. Plots of cassava, showing mosaic resistance, are being increased for distribution in all districts.

Each autumn, encouragement is given to plant sweet potatoes on the fringes of swamps so as to obtain cuttings for planting as soon as the rains break the following spring. This policy has undoubtedly been beneficial.

The cultivation of the banana plantations leaves much to be desired. In Toro due to drought and high winds coupled with the lack of cultivation, bananas have been very scarce. In Bwamba there has been a big tendency to dig out bananas and plant rice : banana weevil is one of the main causes for this as it has spread very rapidly throughout Bwamba.

Miscellaneous.

(*a*) *Mixed Beans.*—Owing to the dry weather in Ankole only 58 tons were bought as against 424 tons in 1945 and 367 tons in 1944. The autumn crop will also not be good as a result of the excessive rains.

(*b*) *Onions.*—Exports from Toro and Ankole have continued and amounted to about 40 tons.

(*c*) *Pigeon Peas.*—With no imports of the India pea, dhall, there has been a keen demand for these peas. In this Province, Lango District which is the largest producer has had an exceptionally large crop this year most of which will be sold in 1947. The controlled marketing and the guaranteed price was lifted in 1945 and since then prices have risen sharply.

The sales in Lango have been in tons :—

1942.	1943.	1944.	1945.	1946.
Nil	59	66	27	100

(*d*) *Beeswax and Honey.*—The sales of beeswax from Acholi, Toro and Kigezi amounted to 4,175 lbs., which is better than the previous year. Over half of this amount was produced in Kigezi. In Acholi production has been greatly reduced because of the demand from Kenya for honey for beer making. Considerable quantities of raw honey in the comb were exported from Lango and Acholi; and it is believed this quantity may have reached 200 tons from the two districts.

(*e*) *Eggs and Poultry.*—About 300,000 eggs are being exported to Kampala each year through an agent; and about 7,000 fowls by Africans on permits.

Education.

(*a*) *Rural Assistants.*—The first of these men appointed to Lango has continued to do useful work on grazing and the reclamation of overgrazed areas.

Four others were passed out from Serere early in the year and were seconded temporarily to assist teaching at the Ngetta Training Centre for ex-soldiers. One of these was found to be of no use as a teacher and has been put on to district work.

Three more men finished their course at Bukalasa in August and were sent to their own districts (two to Ankole and one to Bunyoro) to carry out in their own areas what they have been taught. No more are under training now.

(*b*) *Ngetta Training Centre.*—The training centre was enlarged from Civil Reabsorption funds to accommodate 100 ex-soldier trainees. The first "pilot course" was held in June for 32 ex-soldiers. The courses were for six week periods which have now been extended to eight weeks. They have all been successful as far as interest and hard work are concerned and by the end of the year 153 trainees had attended.

The officer in charge of the training centre is visiting the trainees after they return to their homes to give them all assistance to lay out their farms on the right lines.

Farm Schools.—The Verona Fathers' Mission farm school at Gulu was closed down on 31st December, 1940, as the mission was taken over for a military camp. The Ngetta small holding course has been superseded by the present training farm as stated above.

Prison Farms.—The Native Administration prison farm at Lira continues to provide all the food needed for the prisoners and to demonstrate good farming practice. Prison warders from Lango have attended a month's course at Serere during the second half of the year.

Improved Prison Farms have been or are being laid out for the Protectorate Prisons in Masindi, Mbarara and Gulu.

Kigezi Resettlement.

Following the report made early in 1945 on the over-populated areas around Kabale in Kigezi District, a resettlement scheme was started in 1946 to obtain voluntary resettlement of families in the undeveloped and uninhabited country in Kinkizi and Ruzhumbura, above the Lake Edward escarpment.

The preparatory work of obtaining volunteers for the scheme consisted of intensive propaganda over a long period. Once the senior chiefs were convinced of the necessity to reduce the over-crowding, parties of prospective

settlers were taken out in lorriès to view the area and select land. Later these settlers returned during June to prepare their cultivated land and build houses. Temporary camps were built for them en route to the new area and at their destination so that they could be housed while "settling in". Towards the end of the year many of them were joined by their wives and families. Lorries were provided to transport their entire household and effects. Thirteen miles of new road have been made into the resettlement area. Two game guards have been posted to the area to protect the new settlers' crop and provide an occasional meat meal for new immigrants. Soil conservation measures are being employed in the new cultivation and average yields are being obtained.

Approximately 1,500 men, women and children had settled by the end of the year and all seemed to be very happy in their new homes.

It was estimated that by the end of the year 4,000 people had moved out of the overcrowded areas around Kabale; 2,500 of these had moved unassisted to Ankole and Belgian Ruanda. This demonstrates the continued shortage of land in this overcrowded area.

Non-Native Agriculture.

During the war a number of estates that had been closed down were reopened.

Two new estates have been opened in the West Nile for flue cured tobacco and two pyrethrum plantations were opened in Kigezi as a war-time measure.

With the increase of coffee prices much abandoned coffee has been reopened where it had continued to survive under shade; reasonable yields are being obtained.

When all rubber supplies were cut off during the war, everything was done to stimulate rubber production in Bunyoro.

In Toro increases in the acreage of tea were granted during the war under the Tea Restriction Scheme. The total acreage in Toro is now about 1,300 with another 300 acres being planted.

A Government Cinchona Research Station was started in Toro during 1946.

All estates have suffered from a shortage of labour, especially the sisal estate at Masindi Port and the Tea Estates in Toro.

Pests and Diseases.

Seven swarms of Desert Locusts were reported from Lango, Bunyoro and Acholi between January and May. No other swarms were reported in the Province. Damage to crops was negligible.

Other pests and diseases took a light toll of crops except Blackarm in Bunyoro and Boll Worms in West Nile which seriously reduced the cotton crop.

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ANNUAL REPORT—BUGANDA PROVINCE.

PART I.—ADMINISTRATIVE.

1. Meteorological.

The year opened with an unusually severe and prolonged dry season, which lasted from the beginning of December 1945 until the end of March 1946. The rains broke in most areas in early April, and thereafter never ceased over any considerable period for the rest of the year, so that the total rainfall for the year was heavy, the sole exception being Masaka District where rainfall was on the light side over long periods. In Mengo and Mubende Districts annual crops harvested during the latter part of the year suffered in yield from the excessive rainfall.

2. Cotton.

(*a*) 1945/46 *Crop.*—The total crop was a very average one, though the Mengo-Entebbe Zone suffered from the worst epidemic of blackarm disease seen for many years in Buganda which led to rather low yields in that zone. Production statistics were as follows :—

	Estimated acreage.	Tons seed cotton sold.	Yield lbs. per acre.	Weighted average price per 100 lbs. seed cotton. "A" quality.	"B" quality.
				Shs. cts.	*Shs. cts.*
Mengo–Entebbe	344,566	59,023	384	18 00	4 50
Mubende–Toro (excluding Toro)	52,359	12,140	519	17 32	4 50
Masaka	30,628	6,320	462	17 00	4 50
TOTAL ..	427,553	77,483	..	..	..

A notable feature is that the Masaka acreage, which has shown a steady decline over many years, has begun an up-swing in the 1945/46 and 1946/47 seasons, probably due to the stimulus of higher prices and to a lesser extent to favourable planting seasons.

The crop is estimated to have provided a gross return of £1,544,785 to growers in Buganda.

Of the segregated areas, Bugerere produced 1,290 tons of seed cotton, and the Kawanda Seed Farm 49 tons (516 lbs. per acre) both from B.P.52 seed. The Entebbe segregated area continued to grow X.3, but the seed was not required for planting this year, and was sold for export. In Masaka District the area of "Masaka Local" cotton produced approximately 5,280 tons of seed cotton, the X.3 area 1,040 tons, and the small area of late-planted B.P.52 in Kabula County 18 tons.

(*b*) 1946/47 *Crop.*—The only major seed movement was of B.P.52 seed from the Bugerere segregated area of planting in East Kyagwe. The Entebbe segregated area was planted with B.P.52 from Kawanda Seed Farm, which

also resupplied seed for planting in Bugerere. Estimated acreages planted were as follows :—

Zone.	Acres.
Mengo–Entebbe	308,241
Mubende–Toro (excluding Toro) ..	71,580
Masaka	29,326
TOTAL ..	409,147

The crop at first showed promise of being a very heavy one, but continuous wet weather at the end of 1946 and early in 1947 has ruined the prospects.

3. Coffee.

The 1945/46 picking season produced a record crop, the bulk of which was exported during 1946. The 1946/47 crop is much smaller, as maybe expected following such a heavy one. Records of purchases by primary buyers during the year 1946 were as follows, with the 1945 figures given for comparison :—

	1946.	1945.
	Tons.	*Tons.*
Arabica (hulled) ..	17	434
Arabica (dry cherry) ..	1,059	
Robusta (hulled) ..	22	18,967
Robusta (dry cherry) ..	37,343	

The gross return to African growers over the 1945/46 picking season is estimated to have been about £713,000, apart from considerable sums received by non-native planters.

Prices payable at the curing works remained fixed under the Control, and were only varied once during the year when they were raised on December 23rd. These prices were as follows in cents per lb. :—

	To December 22nd.	After December 23rd.
Arabica (hulled) ..	36	40
Arabica (dry cherry) ..	16	18
Robusta (hulled) ..	30	34
Robusta (dry cherry) ..	15	17

Considerable congestion occurred at the curing works in the early part of the year when an enormous crop was being handled. The following table shows quantities of the various grades of coffee passed for export by the grading inspectors during the year :—

Grade.	Mengo.	Masaka.	Total.
	Tons.	*Tons.*	*Tons.*
Arabica F.A.Q.	264	138	402
Arabica U.G.	..	19	19
Arabica Triage	..	4	4
Robusta F.A.Q... ..	14,902	7,922	22,824
Robusta U.G.	21	400	421
Robusta Triage ..	447	332	779
TOTALS ..	15,634	8,815	24,449

In Masaka, owing to drought early in the year, the quality of the mid-year buyings was so bad that they could hardly be bought at the ordinary price and threatened to spoil the standard of coffee for the district. A special marketing season was therefore arranged from 15th July to 23rd August during which this coffee could be disposed of, with a price of 10 cents per lb., at the curing works offered on behalf of the Control.

During the year 17 convictions were obtained in the courts for offences in connection with coffee marketing. Continued high prices encouraged growers to go on extending their acreages, and the following numbers of coffee seedlings were issued from Government nurseries :—

Mengo District ..	461,802
Mubende District ..	61,811
Masaka District ..	142,656
TOTAL ..	666,269

With these high prices coffee plots are in general better maintained than when prices are poor, but the standard is still very low and little attention is given to soil conservation ; the large growers also had difficulty in getting enough hired labour, and many plots were weedy for this reason.

4. Maize.

The autumn-planted crop of 1945 produced the small amount of 62 tons for sale in Mengo District early in 1946.

For the spring-planted crop of 1946 a target production of 400,000 bags including 300,000 for export was set. Prices were set at 4 cents per lb., to the grower throughout Mengo District, and in Masaka District varied back from 4 cents per lb., at Masaka itself. The Masaka crop was negligible, mainly owing to unfavourable weather and the counter-attractions of other crops such as chillies, but the Mengo crop was an excellent one. The crop acreage in the two districts was twice estimated by different samples in order to provide a check of the accuracy of the method ; one estimate gave 127,272 acres and the other 152,957 acres.

Marketing took place from August to December, and total purchases were 455,488 bags (as against only 43,943 bags in 1945 when the original export target was a small one and the weather unfavourable). These purchases were made up as follows :—

	Bags.
Mengo–Entebbe Ginning Pool	357,876
Mubende–Toro Ginning Pool	12,223
Masaka District	767
Buganda Growers' Co-operative Union ..	22,867
Estate Buyings	61,755
TOTAL ..	455,488

Out of this crop the quantities exported from Buganda were as follows :—

To	*Bags.*
Kenya	271,681
Tanganyika	69,977
Seychelles	4,000
Eastern Province of Uganda	10,001
TOTAL ..	355,659

Out of the remainder of the crop, 997 bags were reserved for seed, 629 were condemned as unfit for human consumption, and 300 were destroyed by fire. The remaining 97,903 bags were utilised for internal consumption in Buganda.

The usual inspection services were provided at markets, stations and ports. In this work we had the assistance of three European officers of the Kenya Maize Control. The percentage of rejections out of deliveries to stations and ports for export was only 5·3%, which is considered a very satisfactory figure in view of the wet weather during the season.

With the experience of several previous export seasons behind us, the complicated arrangements for seed distribution (including the importation of 319 tons of Kenya seed), crop and railing estimates, marketing, railing and inspection, went more smoothly than ever before, but only at the expense of our staff in Mengo District devoting a major proportion of their time to this single crop.

Owing to the demands of other crops, only a small acreage of maize was planted in the autumn of 1946, which will produce at most a few hundred tons for internal consumption in 1947.

5. Pulses.

(*a*) *Beans.*—Large crops were grown both in the spring and autumn rains of 1946, and a surplus of 9,986 tons was marketed (as against 7,732 tons in 1945) ; this crop is probably a high record for Buganda. A large proportion of this was exported, much going to Tanganyika. Prices to the producer were based on gazetted f.o.r. prices.

(*b*) *Soya Beans.*—Prices remained fixed at 9 cents per lb. to the grower in Mengo District, and 8 cents per lb. in Masaka. This crop continues to decline in popularity with growers, especially as the price of other produce rises, and only 2,524 tons were marketed in Buganda in 1946 (as against 3,437 tons in 1945). The crop was disposed of by export and by allocations to Messrs. Soya Industrial Products, Ltd., at Jinja.

(*c*) *Grams.*—This produce, which is not controlled, continued to command high prices for consumption by the Indian community in East Africa. Recorded sales declined from 1,059 tons in 1945 to 965 tons in 1946, but returns are not compulsory and total sales were probably considerably larger than this.

6. Oilseeds.

(*a*) *Groundnuts.*—Sales of this crop continued to decline, as people find other crops more profitable and also domestic consumption is rising (probably partly due to the shortage of meat), which is in itself a very desirable tendency. What surplus is available is also largely disposed of between growers themselves for seed at inflated prices. Sales in 1946 were 456 tons unshelled and 17 tons shelled nuts (against a total of 896 tons in 1945).

(*b*) *Simsim.*—Sales of this crop continued to decline rapidly for similar reasons, and it seems unlikely that it will ever again figure importantly in the cash economy of Buganda. Sales were only 198 tons (334 tons in 1945).

(*c*) *Castor Seed.*—In spite of a rise in price to Shs. 390 per ton f.o.r. all stations in April, cultivators did not find the collection of seed very attractive and sales declined from 270 tons in 1945 to 172 tons in 1946.

(*d*) *Cotton Seed.*—Internal utilisation for seed and fuel continued to be stringently controlled, and maximum quantities were made available for the Deputy Controller to allocate for crushing by Uganda mills and for export to East African Territories and overseas.

7. Minor Produce.

(*a*) *Millets.*—Intensive propaganda and some seed distribution were undertaken to try and increase production of Eleusine millet, mainly as a famine reserve. There was a large increase in acreage over the previous year, but the produce was used for domestic consumption as sales dropped from 217 tons in 1945 to 125 tons in 1946. Sales of sorghum millet, on the other hand, rose from 164 tons in 1945 to 862 tons in 1946. The bulk of these sales was in Masaka District, and the produce was mostly exported to Tanganyika.

(*b*) *Chillies.*—With chillies finding a free market at world price levels, prices to the grower remained very attractive and Masaka District in particular indulged in what may be described as a mad rush to plant and trade in them. Total recorded sales were 1,469 tons (414 tons in 1945), but again returns are not compulsory and actual sales were probably a good deal higher. Most of the sales were of large chillies (Capsicums) which are easier to pick than the small chillies although the latter command a higher price. The average price paid to the grower for large chillies in Masaka District during the year was 47½ cents per lb. Owing to frequent complaints about the low grade of Uganda chillies, arrangements for grading them at Mombasa were discussed but did not come into force during the year.

(*c*) *Fruit.*—Marketing continued to be organised under the Control to ensure adequate supplies for the military and for the Polish Refugee Settlements. Total sales were 543 tons of pineapples and 405 tons of citrus fruit, and recorded sales of soft fruit (not controlled) such as bananas, mangoes, and pawpaws were 548 tons.

(*d*) *Eggs.*—Supplies throughout most of the year were quite unequal to the demand, though Buganda received what surpluses were available from the Eastern and Western Provinces, and also imported some from Kenya. Serious control of marketing was first organised in February, 1946, with the Provincial Agricultural Officer, Kampala, as Deputy Controller for Buganda and the Western Province, and with the object of ensuring that the various classes of consumers received equitable allocations. The total number of eggs recorded as entering the Control from Buganda was 51,047, but this is exclusive of sales in local markets and by house-to-house sellers, which actually constitute the bulk of sales.

(*e*) *English Potatoes and Onions.*—Recorded sales were 163 tons of English potatoes and 92 tons of onions, but these are not controlled produce and total sales were certainly much greater. English potatoes were in general sufficient for local demand, but onions and shallots were rather scarce.

8. Food Crops.

In general cultivators had enough food for themselves throughout the year, but as a result of the prolonged dry season the usual mid-year food shortage was intensified, and from April to September it was extremely difficult to find enough food for the towns, for the large consuming institutions such as hospitals, schools and prisons, and for labour forces on

estates. Supplies of plantains to Kampala were partially maintained by deliveries from Masaka, but from July these had to be severely cut down owing to the danger of a shortage developing there. It was extremely fortunate that there was a large cassava crop in the ground, and it was possible to permit controlled marketing of dried cassava in Masaka and Mengo Districts between March and October, 1946. These marketing periods produced 1,015 tons of dried cassava in Masaka and 479 tons in Mengo. This cassava was milled and mixed with soya bean flour to the order of the Director of Supplies to produce "cassoya" meal, and it may be said that the "cassoya" supplies saved a critical food situation. A similar mixture of maize and bean flour proved extremely unpalatable.

Damage by banana weevils continued to increase especially in neglected plantain gardens. Mosaic disease of cassava also appeared to be on the increase, particularly in Mubende and north Mengo District. Sweet potato weevils again did serious damage during the prolonged dry season.

9. Extension Work.

By arrangement with the Buganda Government, a scheme was started to use some of their prison farms as centres for the increase and distribution of seed of improved varieties of annual crops (beans, groundnuts, soya beans, etc.), from the experiment stations. Several lorry-loads of cuttings of mosaic-resistant cassava varieties were also distributed to various increase centres in the worst infected areas, while large numbers of cuttings from earlier increase plots were issued to cultivators.

A start was made with more widespread centres for the distribution of pure-bred livestock by the creation of a pig unit at Mityana (with Large White pigs at present) and a poultry unit at Kakumiro (Rhode Island Reds).

The competitions between Gombololas for a challenge shield in each of the more important counties of Buganda, started in 1945, were extended more widely in 1946. The subject for the year's competition was the general care of plantain gardens. In Kyadondo County an experimental scheme was tried of a cash bonus from rural betterment funds to the muluka chief in each Gombolola who was responsible for most agricultural progress. The ultimate usefulness of these two schemes cannot be judged until they have run for two or three years at least, but it has already been found that the judging of the competitions tends to take up a disproportionate amount of staff time.

The usual competition between cultivators' groups for the Buganda Government Cup was held in Masaka District, and won by the Kirembwe group.

With the formation of an Animal Husbandry Committee to co-ordinate work between the Agricultural and Veterinary Departments on livestock in relation to the land, the Officer-in-Charge, Kawanda, who is secretary of the Committee, took over agricultural extension work in the Ngogwe area of Kyagwe, which has for some time been used by the Veterinary Department as a livestock improvement area. Considerable progress in mixed farming is being made there. 100 wheelbarrows, which were unobtainable locally, were bought from military disposals and re-sold to cultivators, largely in this area, for transport of manure, for which they are much in demand.

10. Publicity.

21 agricultural articles were sent for publication to the vernacular Press. A pamphlet on banana cultivation was prepared, and 1,000 copies printed and distributed free to chiefs and others in connection with the agricultural

shield competitions. A diary for 1947 with notes for cultivators was published by the Uganda Bookshop containing material supplied by this office. Suggestions for agricultural material were supplied to the Public Relations and Social Welfare Department for possible use in strip cartoons and in plays by demonstration teams.

As usual, this office was frequently called upon to provide a speaker to talk on agriculture to schools, educational associations, the Uganda Society, etc. A notable feature was a series of lectures to the Standing Committee of the Mengo Lukiko (Buganda Government Council) arranged by the Resident, in which two lectures were given by our staff during 1946. A paper on "Agricultural Extension Methods" by Mr. Masefield was published in the *East African Agricultural Journal*.

11. Agricultural Education.

The two years' course at Bukalasa for Rural Assistants was completed in June. Six of these men were posted for field work in Buganda, and have been doing very satisfactory work in various capacities. No new course was arranged during the year.

Twelve students in training to become Assistant Instructors completed their course at the same time, and a new 12-month course with twenty-six students started in July.

The resumption of courses for cultivators and chiefs was not possible owing to the demands on accommodation and staff made by the agricultural courses for ex-soldiers which are run by the Civil Reabsorption Officer at Bukalasa. Three Makerere students did a month's practical work on the farm in March.

23 lectures and excursions were taken by members of the departmental staff in a training course for African probationers for welfare work between June and September.

12. Miscellaneous.

In April, all three districts were invaded by swarms of the Desert Locust coming from Tanganyika. These swarms passed through very quickly, and damage done to crops was insignificant. In May, one very small band of hoppers was discovered in Mengo District and destroyed.

Supplies of hoes were rather scarce during the early and middle parts of the year, and this probably had some effect on cultivations, but towards the end of the year supplies improved to a satisfactory level.

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ANNUAL REPORT—EASTERN PROVINCE.

PART I.—ADMINISTRATIVE.

1. Weather.

During the second half of 1945 good rains occurred up to the end of August, but during September and October rains were variable as, while satisfactory rains were received in Bugishu, elsewhere there were intermittent dry spells which checked growth. Except in the Bugishu hills, dry weather set in during November and this persisted until March when sufficient rain was received to permit the germination of eleusine millet.

The planting rains began in April and, with the exception of a dry spell in July, which held up planting operations, particularly in Busoga, continued until the middle of December. Exceptionally heavy rain occurred in the northern half of the Mt. Elgon area during July and August where a total of 43" was recorded at Sipi during the two months, and there were very heavy precipitations in parts of Teso also.

2. Cotton.

THE 1945/46 CROP.

(*a*) *Planting Figures* (*in Zones by Months* (*Acres*)).

Zone.	May.	June.	July	August	September.	Total.
Busoga	2,211	19,982	95,011	77,764	18,386	213,354
North Central	607	11,406	51,846	43,436	2,380	109,675
South Central	331	12,630	53,373	28,162	1,759	96,255
Usuku	4,635	4,640	1,920	432	..	11,627
North Teso	636	7,851	20,143	12,111	..	40,741
Segregated Areas ..	995	3,406	10,683	11,544	..	26,628
South Teso	1,472	11,146	28,411	14,366	..	55,395
South Lango–Teso ..	99	1,159	8,612	8,787	..	18,657
TOTAL ..	10,986	72,220	269,999	196,602	22,525	572,332

(*b*) *Total Purchases of Seed Cotton by Zones* (*Tons*).

Zone.	December.	January	February.	March	April	Total.
Busoga	..	6,628	11,355	5,410	222	23,615
North Central	..	3,055	2,809	1,621	7	7,492
South Central	..	2,114	2,550	1,962	4	6,630
Usuku	335	107	..	..	..	442
North Teso	..	638	332	8	..	978
Segregated Areas ..	..	611	413	54	..	1,078
South Teso	..	1,204	699	58	..	1,961
South Lango–Teso ..	..	269	304	42	..	615
TOTAL ..	335	14,626	18,462	9,155	233	42,811

(c) *Weighted Average Prices paid for each quality for the Season and Average yield per Acre by Zones.*

Zone.	A. Quality.	C. Quality.	Yield per acre in lbs.
	Shs. cts.	*Shs. cts.*	
Busoga	17 00	4 50	247
North Central ..	16 50	4 50	153
South Central ..	17 00	4 50	154
Usuku	15 50	4 00	85
North Teso	16 00	4 50	54
Segregated Areas ..	16 00	4 50	91
South Teso ..	16 00	4 50	79
South Lango ..	16 00	4 50	74

(d) *Quantity bought of each quality for Season in Tons.*

Zone.	A. Quality.	C. Quality.	Total.
Busoga	23,510	105	23,615
North Central ..	7,479	13	7,492
South Central ..	6,600	30	6,630
Usuku	438	4	442
North Teso	974	4	978
Segregated Areas ..	1,021	57	1,078
South Teso ..	1,888	73	1,961
South Lango ..	597	18	615
TOTAL ..	42,507	304	42,811

Agronomy.—Owing to the delay in the spring rains cotton planting was later than usual and the bulk was planted during July and August. The crop made good growth at first and it was anticipated that a normal crop would result, but by the end of October it became clear that Lygus and Blackarm had taken an unusually heavy toll and this, combined with the early cessation of the rains, which resulted in a considerable amount of boll shedding, reduced crop prospects considerably.

Pests and Diseases.—Early planted cotton was heavily attacked by Lygus and Blackarm but the damage did not become apparent until late in the year. There were very few cotton stainers (*Dysdercus* spp.) presumably due to the longer close season.

Marketing.—It was possible to open all Zones in the Eastern Province and adjacent areas (including Kenya) on the same date, *i.e.*, 14th January, 1946 (except for the usual early season in Usuku ; 3rd December, 1945, to 23rd January, 1946). Grade was generally satisfactory as weather conditions were ideal for harvesting. Although not a new development, a fair percentage of cotton in Busoga was not picked and was destroyed during burning operations. Yields in all Teso Zones were again under the 100 lbs. per acre mark.

THE 1946/47 COTTON CROP.

There was no change in varieties in Busoga and North and South Central Zones, each area supplying its own seed ; the North Central Zone has thus had only one issue of B.P.52 seed (the "wash out" made in 1945 from seed supplied from Budama).

In Teso, improved N.17 was distributed in the Segregated Areas and B.181 previously grown in two Gombololas was extended to the Gombololas of Kamuda, Gweri, Rappayi, Wera and Kattine. A small quantity of K.28 was planted at Lalle. S.P.84 continued to be grown in Usuku and N.17 throughout the rest of the North and South Teso Zones.

The Nakabango (Busoga) wave increase scheme to increase N.17 selected types broke down at the Gombolola stage as some growers took their seed from the wrong ginnery (they are adjacent in Jinja); the scheme will however be continued.

Agronomy.—The acreages planted up to the end of the year were as follows :—

Planting Figures in Zones by Months (acres).

Zone..	April	May	June	July	Aug.	Sept.	Oct.	Total.
Busoga	..	1,944	19,849	78,506	105,642	32,190	..	238,131
North Central	..	1,943	18,430	47,240	44,035	3,011	..	114,659
South Central	..	285	12,004	47,206	44,683	4,842	16	109,036
Usuku	2,871	9,383	7,349	1,175	..	..	..	20,778
North Teso	4	4,165	19,887	18,846	8,907	..	..	51,809
Segregated Areas ..	1	3,727	11,185	12,656	11,800	..	..	39,369
South Teso ..	..	4,292	24,356	18,612	13,407	..	..	60,667
South Lango–Teso ..	..	383	2,201	11,706	7,688	..	..	21,978
TOTAL ..	2,876	26,122	115,261	235,947	236,162	40,043	16	656,427

The long dry season and the necessity to concentrate on food production in April and May delayed the preparation of the land for cotton planting with the result the greater part of the acreage was again planted in July and August and planting continued well into September in Busoga and Mbale. Weather conditions were however generally favourable especially for the late planted crop and by the end of the year there were prospects of obtaining a crop of slightly over 100,000 bales.

3. Arabica Coffee.

Agronomy.—Further use was made of the "Gombolola Coffee Books" in which are recorded the names of those growers who have been issued with instructions for improvement of their coffee under Native Authority Rules, but the number of cases in which such action was necessary was considerably less than in the previous year. Action taken under the rules has had salutory effect on those who were showing little interest in their coffee in previous years. *Digitaria*, however, remains a problem, and will probably continue to be so until large numbers of deep digging forks are available.

Planting of shade and washbreaks continued fairly satisfactorily, nevertheless the bulk of the plots in the lower areas require more shade. *Cordia* seedlings and *Vetiver* grass were given out free at nurseries during coffee seedling distribution, but most of the shade that has been planted is *Ficus*. Practically all debts of pruning fundis (experts) were paid up by the end of the year, and payments for pruning done in 1946 appear to have been made more promptly than in the past few years; this is probably a result of the "coffee books", since pruning fundis are refusing to prune for growers who do not pay their debts, and neglected coffee is in danger of forcible stumping and uprooting.

Pests and Diseases.—A somewhat heavy attack of *Antestia* gradually built up through the autumn of 1945, but was brought under control during the dry season and has not so far again assumed serious proportions. Local

attacks of *Bixadus* on a small scale were dealt with ; the spotting and control of *Bixadus* is now part of the duties of the pruning fundis. *Stephanodores* was a little more common than normal during the early autumn of 1945.

Marketing.—The 1945/46 crop amounted to 2,817 tons parchment or 112 tons more than in the previous year, and the total sum paid to growers was £97,169. The actual price paid to growers worked out at 31·7 cents per lb. for Bugishu Coffee Scheme parchment and 30·2 cents per lb. for native prepared parchment. There was an increase in the proportion of defective (insect damaged) beans but general quality improved.

The original Coffee Growers Club extended its membership from 29 members to 128 members and two new clubs were formed. The cherry brought in by members was examined and that graded as good was bought at a premium.

Replacement Scheme.—This ten years replacement by uprooting scheme, was continued and extended to cover four Gombololas in South Bugishu in addition to the whole of Central Bugishu where the second year's uprooting was carried out. Unfortunately there were many deaths among the 1945 replaced seedlings (due to the long dry season) and wherever these occurred a corresponding number of free extra seedlings was issued. A total of 178,268 replacement seedlings were given out, and 430,457 seedlings were issued in the normal way making the total issued to date (excluding replacements) 11,187,743.

Central Bugishu Self Management Scheme.—The Bugishu District Council continued to run all aspects of buying as agent for the Bugishu Coffee Marketing Company in Central Bugishu.

1946/47 Crop.

Owing to abnormal weather conditions the crop was later than usual and very little crop was bought before the end of October. By the end of the year total sales were 2,152 tons of parchment, of which 1,418 tons were Native Prepared Parchment and the total crop was estimated at 3,000 tons.

4. Oilseeds.

A maximum acreage of groundnuts was once again called for and as much simsim as possible without detracting from groundnut production. Owing to the early commencement of the dry season in 1945, which was not favourable for the production of alternate foods and the recollection of two lean years still fresh in the memory of cultivators, much of the 1945 planted crop was eaten. The 1945 crop in particular and the 1946 crop to a lesser extent was late planted, *e.g.*, in May and June, but weather conditions were favourable and good yields were obtained although flooding in October, 1946, in Teso destroyed some of the late planted plots. Statistics relating to the last two crops are as follows :—

1945/46 Crop.

District.	Groundnuts.		Simsim.	
	Acreage.	Sales (as shelled).	Acreage.	Sales.
		Tons.		*Tons.*
Busoga	36,450	1,689	4,400	17
Mbale	34,747	671	4,630	2
Teso	138,485	1,931	36,001	378
Total ..	209,682	4,291	45,031	397

1946/47 Crop.

District.	Groundnuts.		Simsim.	
	Acreage.	Sales (as shelled).	Acreage.	Sales.
		Tons.		*Tons.*
Busoga	40,337	2,084	2,832	11
Mbale	34,751	997	3,304	1
Teso	135,813	1,724	38,576	253
Total ..	210,813	4,805	44,712	265

With the exception of very small quantities of unshelled groundnut seed in buyers' hands which was sold to growers in Busoga, no seed was issued for planting in 1946 as there were ample seed stocks. Growers received 12 cents per lb. shelled and 7 cents per lb. unshelled for groundnuts and 12 cents per lb. for simsim.

5. Maize.

As in 1945, no maize was grown for the purpose of export but it was hoped to meet the internal requirements of Busoga and Mbale Districts and therefore millers and employers of labour were given buying permits. When it became apparent early in the year that there would be a shortage of cereals in East Africa, purchasers were required to buy all the crop offered for sale.

In Busoga the acreage rose by 20,000 acres and the crop yielded well. This increase, although well below the 1944 figure is due to growers being encouraged by good yields, high prices, and a liking for the crop, especially for consumption in the green state.

There was a rush to buy the crop in Busoga (buyers had underestimated the amount people would sell) and weather conditions during September being wet, a large proportion was purchased in a damp condition and the quantity was in excess of storage and drying space. Arrangements were therefore made to export surplus requirements to Kenya as sub-grade maize and 44,530 bags were booked, mainly to the Grain Conditioning Plant, Nairobi, at Shs. 11/50 per bag.

In Mbale total sales approximated to local requirements. The Bukwa crop, estimated at 1,100 bags was bought for sale to the Kenya Farmers' Association, Kitale, as this is the natural outlet for produce in this area. Statistics relating to the two crops are as follows :—

	1945.		1946.	
	Acreage.	Total Purchases.	Acreage.	Total Purchases.
		Bags.		*Bags.*
Busoga	27,000	21,831	46,705	105,062
Mbale	21,016	10,703	29,884	11,900
Total ..	48,016	32,534	76,589	116,962

6. Rice.

Maximum production was again required and with this end in view the price to growers was increased by 2 cents per lb. for pure varieties, *i.e.*, Bungalla and Senna and 1 cent per lb. for other varieties and mixtures, the object of the differential prices being to encourage the production of good

varieties, improve qualities and reduce losses in milling. The prices paid were therefore 10 and 9 cents per lb. respectively. The campaign for increased production was linked with an attempt to improve cultural methods. The response was reasonably good in Mbale and Teso where 16 tons of seed were distributed to growers for planting but very disappointing in Busoga where the acreage planted declined markedly. Statistics relating to the two crops are as follows :—

	1945.		1946.	
	Acreage.	Sales Paddy.	Acreage.	Sales Paddy.
		Tons.		*Tons.*
Busoga	21,088	324	9,346	1
Mbale	30,753	931	33,161	331
Teso	6,797	246	9,827	66
TOTAL ..	58,638	1,501	52,334	398

The crop made good growth and was reasonably free from diseases and pests and it was anticipated that sales would be on the same scale as in 1945, but unauthorised marketing seriously interfered with buying by the Eastern Province Rice Millers' Association, which organisation was again entrusted with the purchase and milling of the crop.

7. Wheat.

No particular encouragement was given to this crop in Bugishu but growers continue to cultivate wheat for their own consumption and at the end of the year buying was organised to dispose of a small quantity, surplus to cultivators' needs, in Bukwa.

8. Soya Beans.

Efforts to establish soya beans either for food or as a cash crop have failed and a negligible acreage was planted : the total sales in 1946 were one ton only.

9. Fruit.

The requirements of the East African War Supplies Board decreased steadily during the year and the supply of citrus fruits during certain periods far exceeded the demand. During periods of plenty open permits were issued to individuals who wished to export to Kenya but these did not absorb the production of hard fruits as the demand in Kenya at these seasons is very limited owing to ample supplies being available from Zanzibar and elsewhere.

10. Minor Economic Crops.

(*a*) *Shea Butter Nuts.*—Marketing proceeded on the same lines as in previous years and sales amounted to 663 tons compared to 451 tons in 1945.

(*b*) *Pigeon Peas.*—The control over marketing and the price guarantee was lifted during 1945 and as a result local prices rose sharply. Approximately 100 tons were marketed in 1945 and it is estimated that sales this year are of the order of 600 tons.

(c) *Bulrush Millet.*—This crop, which is mainly grown for sale to the Indian Community, is becoming increasingly important in the north of Teso District as there is at present a big demand and prices are correspondingly

high. In 1945, 220 tons were purchased at an average price of 22 cents per lb., and in 1946, sales amounted to 232 tons at prices varying from 25–37 cents per lb.

(*d*) *Cowpeas.*—There is at present a big demand for this crop by the Indian Community and sales have increased considerably of late; prices have risen to between 30 and 40 cents per lb. Total purchases amounted to 770 tons compared to 260 tons in the previous year.

11. Food Crops and Famine.

Owing to the late arrival of the 1945 spring rains there was insufficient food to tide the people over until the grain harvest and as a result 360 tons of famine relief food had to be supplied to growers mainly in Mbale District in July and August, 1945. The concentrated drive to produce more food combined with more favourable autumn rains in 1945 restored the position and it was possible to build up small reserves. Although the 1946 spring rains were again delayed there was sufficient food to carry over until the grain harvest and as yields were well up to average: the position in the autumn of 1946 was sufficiently good to allow marketing of sorghum for export, mainly to Tanganyika and 855 tons were purchased.

By the end of 1946, the total acreage under root crops was greater than the average for the preceding six years and favourable weather conditions brought about a sound food position although it was not possible to build up reserves of grain.

Throughout the period, mosaic resistant varieties of cassava were increased and distributed from increase centres and by the end of the year a considerable proportion of susceptible cassava in North Teso had been replaced by resistant varieties; the variety Bitaminsi was extended in other districts. Some progress has been made in persuading growers to plant sweet potatoes on wet land late in the autumn mainly to provide cuttings for use as planting material in the following spring.

12. Education.

With the development of Serere as a centre for short courses in Agriculture for ex-soldiers, it became necessary to curtail certain normal educational activities and the Rural Assistants' course was not held during 1946; courses for cultivators were also discontinued from April, 1945, until July, 1946.

Makerere Students.—Three students were in residence at Serere for the practical course; as there was only one 3rd year student at Makerere this year, opportunity was taken for him to join the two 4th year students in their practical course. The 3rd year student only is a native of Uganda.

Apprentices' Course.—This annual course, which was completed in March, 1946, was attended by 21 apprentices, mainly from Karamoja and the Western Province. The new course, which began in April, 1946, consists of eleven new students and five Karamajong who attended the 1945 course but who returned for a further short period of instruction.

Women Instructors.—The experimental course for women started in 1945 has not been continued, but the five women already trained have been working in their home districts and although it is as yet rather early to judge the results so far obtained, the scheme has possibilities for the future.

Rural Assistants.—The four men from the Eastern Province who completed this two-year course at the end of 1945 have been temporarily employed at Serere as instructors, in connection with the ex-soldiers' courses, instead of returning to their districts for work with the District Teams.

Cultivators' Courses.—Nine courses of one week each were held during the second half of the year; as usual these courses consisted of groups of cultivators (including in one instance ex-soldiers) from small areas together with their local Agricultural Instructor, chiefs, clan leaders and, on occasion, their wives and children. These courses continue to be of particular value where it is possible to visit the cultivators at their homes and interest them in some special project.

Prison Warders' Course.—One course of one month's duration was held for Lango Prison Warders.

13. Karamoja.

On the return of Mr. Watson from leave in September, it was possible to post a full time Agricultural Officer to the District. By the middle of the year, the African staff had increased to 11 Serere trained Instructors, as six more had by then completed their course of training, but one of these men subsequently proved unsatisfactory and was dismissed. By the end of the year five new plant introduction centres were established at Nabilatuk, Napyenenya (N.W. of Mt. Kadam and approximately 10,000 ft. above sea level), Amudat, Loyoro and Moroto which brings the total of these centres up to ten. Instructors are now busy building their houses at these new centres while at those established in 1945, buildings have now been completed. At Moroto the Prison Farm now supplies half the food requirements of prisoners and the town milk supply, which it is hoped to improve by the establishment of a dairy and a clean milk distribution centre.

On the whole the rainfall was very satisfactory throughout Karamoja although, as usual, there were isolated areas, *e.g.*, Kangole, where dry spells between showers were sufficiently prolonged to prevent the reaping of bumper crops. Favourable yields have reduced both the amount of maize meal sold at local trading centres and the total head of stock presented for sale. In some areas there was excellent grazing at the end of November, and the total rainfall at Moroto was 50″ (some 16″ above that of 1945) and at Lotome 35″ or 10″ above the average. In consequence most crops grew well at the previously established introduction centres and good yields of sorghum were obtained in several areas. The importance of livestock at these centres has not been overlooked and it has been possible to start a small herd of cattle at Kangole and obtain a promising herd bull.

14. Pests and Diseases.

Locusts.—A number of swarms of the Desert Locust were reported in Teso, North Mbale and Busoga Districts in April and May, but they were constantly on the move and did little damage to crops.

Blast Disease of rice was present, especially on the crop growing in dry situations, but the incidence of the disease does not appear to be on the increase at present.

Mosaic Disease of cassava is being combatted by the increasing use of resistant varieties.

Sweet Potato Virus.—This disease does not appear to be increasing.

Wild Pig continue to cause serious trouble in South Busoga and must be taken into account when considering resettlement.

15. Miscellaneous.

Prison Farms.—The Teso farms continued to be efficiently maintained and both hay and silage were successfully made to supplement food for the cattle in the dry season. Considerable improvement took place in Busoga, especially at Kaliro where milk is now being produced in excess of actual prison requirements, and in Mbale following the Prison Warders' Course at Serere in 1945. These farms have proved useful as increase areas for mosaic resistant cassava varieties.

Agricultural Implements.—The general supply position as regards hoes has been one of steady improvement, particularly during the last quarter of 1946 when good stocks were received, so that by the end of the year the demand had been almost satisfied. Other implements, ploughs, plough parts, deep digging forks, coffee pulpers, etc., continue to be in very short supply. In Mbale District the scheme to hire out Native Administration ploughs continued in four Gombololas and was a success particularly at Kamuge, where a team of oxen belonging to the Prison Farm could also be hired at Shs. 3 per day.

Honey.—This promising minor industry has developed in Teso during the past two years and production has increased from 170 tons in 1945 to 348 tons in 1946 ; quality was improved by filtering some of the impure honey prior to export.

W. T. O. MAIDMENT,
Provincial Agricultural Officer,
Eastern Province.

Cotton Crops.

Province and Zone.	Acreage.		Sale in Tons.		Yield per Acre in lbs.	
	Totals 1945–46.	Means 1942–46.	Totals 1946.	Means 1942–46.	1946.	Means 1942–46.
BUGANDA—						
Mengo–Entebbe	344,566	295,935	59,023	47,377	384	358
Masaka	30,628	35,051	6,320	3,875	462	270
Mubende–Toro	61,333	65,964	13,164	10,057	481	354
TOTALS ..	436,527	396,950	78,507	61,309	442	327
EASTERN—						
Busoga	213,354	244,949	23,615	26,241	247	248
South Central	96,255	102,379	6,630	6,456	154	141
North Central	109,675	117,413	7,492	10,470	133	192
North Teso	40,741	36,358	978	1,235	54	72
Usuku	11,627	17,076	442	986	85	123
South Teso	55,395	44,568	1,961	3,158	79	176
Segregated Areas	26,628	25,199	1,078	2,004	91	148
TOTALS ..	553,675	587,942	42,196	50,550	120	157
WESTERN—						
North Lango	51,367	51,481	4,416	4,350	192	177
South Lango	31,922	31,318	1,570	1,749	110	122
West Acholi	19,216	14,818	2,712	1,514	316	198
East Acholi : Upper	9,161	10,427	1,064	919	260	282
East Acholi : Lower	6,275		523		187	
Bunyoro	18,825	13,367	2,305	1,394	274	223
West Nile–Madi	18,600	17,473	2,232	1,509	269	198
TOTALS ..	155,366	138,884	14,822	11,435	229	200
PROTECTORATE TOTALS ..	1,145,568	1,123,776	135,525	123,294	264	228

Crop.	Native Cultivation.						Non-native cultivation.		Totals.	
	Buganda Province.		Eastern Province.		Western Province.					
	1945.	1946.	1945.	1946.	1945.	1946.	1945.	1946.	1945.	1946.
Plantains	401,586	442,690	356,402	253,133	78,709	80,747	..	..	836,697	776,570
Sweet Potatoes	101,930	111,543	166,768	176,476	214,057	224,386	..	..	482,755	512,405
English Potatoes	812	1,462	97	..	595	1,712	..	..	1,504	3,174
Millet—Sorghum	31,216	15,338	135,622	169,050	223,945	283,953	..	..	390,783	468,341
Millet—Eleusine	18,558	33,342	720,010	640,447	351,928	399,586	..	..	1,090,496	1,073,375
Cotton	424,260	409,157	575,081	657,631	153,597	191,233	107	107	1,153,045	1,258,128
Coffee—Arabica	2,125	2,855	8,400	8,830	3,171	3,278	3,464	3,464	17,160	18,427
Coffee—Robusta	126,875	139,668	250	684	3,161	2,874	7,849	7,849	138,135	151,075
Maize	47,770	145,173	50,706	89,121	59,245	73,444	..	..	157,721	307,738
Beans	95,589	123,444	123,580	131,224	154,755	142,442	..	..	373,924	397,110
Sugar Cane	1,348	872	1,756	150	602	384	28,279	28,279	31,985	29,685
Chillies	17,367	9,135	..	..	38	33	..	..	17,405	9,168
Simsim	10,840	12,045	45,054	45,102	186,423	174,114	..	..	242,317	231,261
Groundnuts	58,485	59,355	210,182	217,723	88,236	80,116	..	..	356,903	357,194
Cassava	118,119	112,309	144,946	151,741	213,635	220,029	..	..	476,700	484,079
Tobacco	565	446	..	..	7,363	7,039	..	..	7,928	7,485
Wheat	7	4	404	250	825	632	..	..	1,236	886
Rice	45	14	58,939	50,518	3,347	5,702	..	..	62,331	56,234
Onions	470	..	..	..	557	1,218	..	..	1,027	1,218
Rubber—Para	580	580	..	..	..	..	7,000	7,000	7,580	7,580
Pigeon Peas	..	..	..	..	126,366	140,600	..	..	126,366	140,600
Field Peas	251	1,282	..	..	31,217	31,084	..	..	31,468	32,366
Rye	5	..	..	..	..	..	..	..	5	..
Soya Beans	21,791	9,091	1,260	98	10,885	11,437	..	..	33,936	20,626
Tobacco—Nicotine	..	..	..	..	35	300	..	..	35	300
Sisal	..	..	..	..	..	..	9,420	9,420	9,420	9,420
Flax	..	..	..	..	1,520	2,012	..	..	1,520	2,012
Tea	..	..	..	..	..	..	4,524	4,524	4,524	4,524
Pyrethrum	..	..	..	..	..	..	1,330	1,330	1,330	1,330
Miscellaneous	22,461	27,701	666	587	5,844	14,866	370	370	29,341	43,524
TOTALS	1,503,055	1,657,506	2,600,123	2,592,765	1,920,056	2,083,221	62,343	62,343	6,085,577	6,395,835

NOTE.—The figures quoted in respect of non-native Agriculture are based on the last planting return which was called for in 1940.

Comparative Statement of Exports of Domestic Produce from the Uganda Protectorate.

A. Quantities.

	Unit.	1941.	1942.	1943.	1944.	1945.	1946.
Grain and Flour	*Cwt.*	3,614	15,422	57,595	62,393	119,420	181,718
Feeding Stuffs for Animals	*Ton*	285	106	30	50	721	1,266
Chillies	*Cwt.*	6,523	9,586	12,224	13,405	9,406	23,214
Coffee, Raw Hulled	,,	389,449	343,942	393,534	364,506	393,493	610,403
Salt	,,	17,857	22,679	27,882	29,891	29,078	36,374
Sugar, Refined	,,	234,417	290,404	229,880	209,834	221,343	191,239
Tea	,,	7,980	12,860	9,969	12,746	18,150	11,983
Other Articles of Food and Drink	*Value*	..	..	..	..	..	..
Cigarettes	*Lbs.*	889,709	1,035,024	1,286,257	1,891,023	2,001,107	2,053,881
Tobacco, Manufactured	,,	60,825	54,718	43,974	41,972	24,707	36,796
Tobacco, Unmanufactured	,,	951,496	662,921	598,744	923,246	263,450	403,948
Timber	*Cu.ft.*	65,960	88,499	5,471	9,597	37,090	317,007
Tin Ore	*Ton*	450	444	393	385	287	296
Cotton, Raw	*Cental*	1,463,803	944,212	491,260	758,079	1,057,818	876,779
Sisal, Fibre and Tow	*Ton*	899	1,901	1,355	958	998	1,055
Seeds, Cotton	,,	2,653	20,714	10	13,829	34,094	22,872
Seeds, Sesame	,,	95	250	..	..	..	..
Groundnuts	,,	2,888	6,960	368	2	..	3
Hides	*Cwt.*	32,381	32,668	35,411	22,060	21,043	16,280
Skins	*No.*	383,731	351,145	174,308	184,610	475,068	720,905
Rubber	*Cental*	10,813	13,992	19,151	15,188	12,945	13,839
Ivory	*Cwt.*	461	292	240	386	570	696
Other Unmanufactured Articles	*Value*	..	..	..	..	..	..
Methylated Spirits	*Gals.*	6,444	12,909	568	1,238	1,352	1,244
Other Articles	*Value*	..	..	..	..	..	..
Gold Bullion	*Oz.*	10,872	11,016	5,001	3,228	2,751	2,490

NOTE.—Exports to Kenya are not included.

B. Value—£.

	1941.	1942.	1943.	1944.	1945.	1946.
	£	£	£	£	£	£
Grain and Flour	1,274	6,450	31,919	40,826	85,992	191,955
Feeding Stuffs for Animals	842	300	75	140	4,771	12,982
Chillies	18,964	30,335	28,728	41,581	40,742	103,735
Coffee, Raw, Hulled	597,271	702,829	1,143,165	1,012,618	1,143,211	1,767,448
Salt	2,635	3,901	4,720	5,734	4,966	6,477
Sugar, Refined	162,197	212,394	178,099	173,397	197,998	201,490
Tea	55,359	96,344	73,173	88,286	120,531	86,061
Other Articles of Food and Drink	44,162	28,731	71,476	88,588	67,133	..
Cigarettes	99,467	254,324	442,802	563,983	673,618	769,635
Tobacco, Manufactured	13,928	6,902	6,388	7,323	4,623	5,064
Tobacco, Unmanufactured	32,254	21,383	31,381	43,146	7,476	12,153
Timber	13,034	16,118	693	2,373	12,502	103,690
Tin Ore	64,412	69,006	67,820	68,247	50,894	53,255
Cotton, Raw	4,262,235	2,861,475	3,237,822	5,043,413	7,025,774	5,620,079
Sisal	17,694	36,084	30,296	22,991	27,098	39,436
Seeds, Cotton	7,479	58,248	19	57,467	142,240	105,374
Seeds, Sesame	1,228	4,000	..	..	..	..
Groundnuts	43,492	115,040	6,067	42	..	52
Hides	97,868	128,400	138,290	84,261	80,742	94,273
Skins	25,924	26,721	13,143	26,185	60,042	184,395
Rubber	43,723	57,417	71,669	57,073	48,629	53,988
Ivory	18,373	13,256	14,999	23,687	37,711	50,974
Other Unmanufactured Articles	8,773	8,864	28,793	51,489	73,170	..
Methylated Spirits	1,142	2,592	130	258	258	286
Other Articles	2,839	6,989	4,789	7,917	11,161	..
Gold Bullion	74,331	73,103	33,265	20,837	17,920	16,642
TOTAL £	5,710,900	4,841,206	5,659,721	7,531,862	9,939,202	9,479,444

Appendix IV.

Uganda Cotton Exports.

	1942.		1943.		1944.		1945.		1946.	
	Centals.	£	*Centals.*	£	*Centals.*	£	*Centals.*	£	*Centals.*	£
United Kingdom	403,075	1,200,776	240,820	1,614,339	114,072	448,391	269,995	1,823,409	299,144	1,233,343
Ceylon	..	..	3,800	25,650	..	..	5,156	33,514	3,977	26,553
India	495,528	1,527,222	245,948	1,593,396	643,297	4,592,948	781,453	5,166,749	603,632	3,976,837
Union of South Africa	7,984	21,012	680	4,365	600	1,800	..	..	..	..
Zanzibar	20	23	..	..	20	58	40	110	..	..
Kenya	..	..	..	..	..	..	..	..	248	940
Tanganyika Territory	16	18	..	..	90	216	1,173	1,986	..	..
Australia	37,589	112,424	..	..	..	..	1	6	..	..
Aden	..	..	12	72	..	..	..	..	..	..
Sweden	..	..	..	..	..	..	..	..	1,267	5,955
TOTAL ..	944,212	2,861,475	491,260	3,237,822	758,079	5,043,413	1,057,818	7,025,774	908,268	5,243,628

Crop Production—Uganda.

Quantities Marketed and Estimated Values, 1946.

Crop.	Non-Native Production.		Native Production.		Total Production.	
	Amount.	Value.	Amount.	Value.	Amount.	Value.
	Tons.	£	*Tons.*	£	*Tons.*	£
Beans and Pulses	..	..	15,938	137,863	15,938	137,863
Chillies	..	..	1,469	137,056	1,469	137,056
Coffee	3,182	241,832	22,171	1,108,550	25,353	1,350,382
Cotton	..	..	228,709*	4,002,407	228,709*	4,002,407
Cotton Seed	..	..	86,000	236,500	86,000	236,500
Flax	..	..	116	16,686	116	16,686
Groundnuts	..	..	5,845	60,751	5,845	60,751
Maize	..	..	52,159	387,274	52,159	387,274
Rice	..	..	376	10,528	376	10,528
Rubber	608	100,256	..	..	608	100,256
Sisal	1,055	39,436	..	..	1,055	39,436
Simsim	..	..	676	10,680	676	10,680
Sugar	46,031	966,651	..	..	46,031	966,651
Tea	1,714	381,932	..	..	1,714	381,932
Tobacco	..	..	797	43,853	797	43,853
Tobacco Nicotine	..	..	234	2,618	234	2,618
Pyrethrum	957*	12,632	..	..	957*	12,632
TOTAL .. £		1,742,739		6,154,766		7,897,505

*Bales.